

PROTOCOL

Open Access



# Depression, anxiety, stress, and dysmenorrhea: a protocol for a systematic review

Amir H. Pakpour<sup>1,2</sup>, Farideh Kazemi<sup>3</sup>, Zainab Alimoradi<sup>1\*</sup>  and Mark D. Griffiths<sup>4</sup>

## Abstract

**Background:** Dysmenorrhea is one of the most common menstrual disorders and is influenced by various factors. Psychological disorders including anxiety, depression, and stress have been suggested as influencing dysmenorrhea, but previous findings are inconsistent. This study will investigate the relationship between depression/anxiety/stress and dysmenorrhea using a systematic review and meta-analysis.

**Methods:** Online databases including *PsycINFO*, *Scopus*, *PubMed*, *Science Direct*, *ProQuest*, *ISI Web of Knowledge*, and *Embase* will be searched. Appropriate keywords and MeSH terms will be used to retrieve the journal papers published from 1990 until the end of December 2019. To improve search coverage, the reference lists of all included studies will be reviewed to find eligible papers. Inclusion criteria include the following: descriptive, cohort, case-control, and cross-sectional studies; the relationship between depression/anxiety/stress and dysmenorrhea being an objective of the study; and published in peer-reviewed journals. The paper selection, data extraction, and quality assessment of selected studies will be performed independently by two researchers, and disagreements will be resolved through discussions. The Newcastle-Ottawa Quality Assessment Scale will be used to assess the quality of selected studies. A quantitative synthesis will be performed using the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) via the STATA software, if retrieving enough number of studies with no severe methodological heterogeneities. Otherwise, qualitative synthesis will be used to report the findings.

**Discussion:** To the best of our knowledge, this will be the first systematic review on this topic. Performing an inclusive search in major databases over a wide timescale is one key strength of the proposed study and will maximize the coverage of the original research studies on this topic. Results of present study are expected to lead to deeper understanding the relationship between common mental health conditions and dysmenorrhea.

**Systematic review registration:** PROSPERO [CRD42018102199](https://www.crd42018102199)

**Keywords:** Depression, Anxiety, Stress, Dysmenorrhea, Systematic review

\* Correspondence: [zainabalimoradi@yahoo.com](mailto:zainabalimoradi@yahoo.com); [zalimoradi@qums.ac.ir](mailto:zalimoradi@qums.ac.ir)  
<sup>1</sup>Social Determinants of Health Research Center, Research Institute for Prevention of Non-Communicable Diseases, Qazvin University of Medical Sciences, Bahonar blv., Qazvin 34197-59811, Iran  
Full list of author information is available at the end of the article



© The Author(s). 2020 **Open Access** This article is licensed under a Creative Commons Attribution 4.0 International License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons licence, and indicate if changes were made. The images or other third party material in this article are included in the article's Creative Commons licence, unless indicated otherwise in a credit line to the material. If material is not included in the article's Creative Commons licence and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this licence, visit <http://creativecommons.org/licenses/by/4.0/>. The Creative Commons Public Domain Dedication waiver (<http://creativecommons.org/publicdomain/zero/1.0/>) applies to the data made available in this article, unless otherwise stated in a credit line to the data.